CLAIMS

1. Nucleic acid comprising at least one fragment of the human gene *ZNF365*in which said fragment encodes for a functional portion of at least one of the proteins of the ZNF365 group for use in the diagnosis of pathologies associated with kidney stones.

2. Nucleic acid comprising at least one fragment of the human gene *ZNF365* in which said fragment encodes for a functional portion of at least one of the proteins of the ZNF365 group for use in the treatment of pathologies associated with kidney stones.

3. Method to detect in an individual at least one mutation in the gene encoding for one of the proteins of the human ZNF365 group located on chromosome 10 and comprising the phases:

- collection of a sample containing a sufficient quantity of DNA from the aforesaid individual or reproducible in culture;
- isolation of the DNA of said sample;
- submission of the isolated DNA to exponential amplification using as an primer pair for amplification reaction at least two oligonucleotides that are able to amplify at least one fragment of the human gene *ZNF365*, in which said fragment encodes for a functional portion of at least one of the proteins of the ZNF365 group;
- detection of any mutations in at least one amplified fragment compared with healthy controls.

4. Method according to claim 3 in which the DNA exponential amplification phase is performed using primer pairs for the amplification reaction that is able to amplify a part of the fragment encoding the human gene *ZNF365*.

5. Method according to claim 4 in which the DNA exponential amplification phase to amplify a part of the fragment encoding the human gene *ZNF365* comprises the use of the following primer pairs:

Ala62Thr-F: 5' CTC CAC TCC ACC TTT TTA AG 3'
Ala62Thr-R: 5' GCT GAC ATT GGT ACT TAC TG 3'.

6. Method according to claims 3, 4, and 5 in which the detection phase of any mutations in at least one amplified fragment compared with healthy controls is performed using direct sequencing.

7. Diagnostic kit for pathologies associated with kidney stones to perform the method according to claims 3, 4, 5 and 6, that comprises:

- at least one pair of oligonucleotide primers for the exponential amplification reaction of at least one fragment of the human gene *ZNF365*, in which said fragment encodes for a functional portion of at least one of the proteins of the ZNF 365 group;
- a control DNA from a healthy individual not affected by pathologies associated with kidney stones.

8. Kit according to claim 7 in which oligonucelotide primer pairs in the kit for performing the amplification reaction are able to amplify a part of the region encoding the gene *ZNF365*.

9. Protein belonging to the group of the ZNF365 proteins or a functional portion thereof for use in the diagnosis of pathologies associated with kidney stones.

10. Protein belonging to the group of the ZNF365 proteins or a functional portion thereof for use in the treatment of pathologies associated with kidney stones.